

NAME

dwarf_attrval_flag, **dwarf_attrval_signed**, **dwarf_attrval_string**, **dwarf_attrval_unsigned** - retrieve the value of an attribute within a DWARF debugging information entry

LIBRARY

DWARF Access Library (libdwarf, -ldwarf)

SYNOPSIS

```
#include <libdwarf.h>
```

int

```
dwarf_attrval_flag(Dwarf_Die die, Dwarf_Half attr, Dwarf_Bool *ret, Dwarf_Error *err);
```

int

```
dwarf_attrval_signed(Dwarf_Die die, Dwarf_Half attr, Dwarf_Signed *ret, Dwarf_Error *err);
```

int

```
dwarf_attrval_string(Dwarf_Die die, Dwarf_Half attr, const char **ret, Dwarf_Error *err);
```

int

```
dwarf_attrval_unsigned(Dwarf_Die die, Dwarf_Half attr, Dwarf_Unsigned *ret, Dwarf_Error *err);
```

DESCRIPTION

These functions search the debugging information entry referenced by argument *die* for the attribute named by argument *attr*. If the named attribute is found, the functions set the location pointed to by argument *ret* to the value of the attribute. The argument *err*, if non NULL, will be used to return an error descriptor in case of an error.

Function **dwarf_attrval_flag()** sets the location pointed to by argument *ret* to either 0 or 1. If the form of the attribute named by argument *attr* is DW_FORM_flag, function **dwarf_attrval_flag()** sets the location pointed to by argument *ret* to 1 if the attribute has a non-zero value, or to 0 otherwise. If the form of the attribute named by argument *attr* is DW_FORM_flag_present, function **dwarf_attrval_flag()** unconditionally sets the location pointed to by argument *ret* to 1. The form of the attribute must be one of DW_FORM_flag or DW_FORM_flag_present.

Function **dwarf_attrval_signed()** stores the value for the attribute named by argument *attr*, into the location pointed to by argument *ret*. The attribute's value is treated as a signed integral quantity and is sign-extended as needed. The attribute named by the argument *attr* must belong to the CONSTANT class and must have one of the following forms: DW_FORM_data1, DW_FORM_data2, DW_FORM_data4, DW_FORM_data8 or DW_FORM_sdata.

Function **dwarf_attrval_string()** sets the location pointed to by argument *ret* to a pointer to a NUL-terminated string that is the value of the attribute named by argument *attr*. The form of the attribute must be one of DW_FORM_string or DW_FORM_strp.

Function **dwarf_attrval_unsigned()** stores the value for the attribute named by argument *attr* into the location pointed to by argument *ret*. The attribute's value is treated as an unsigned integral quantity, and is zero-extended as needed. The named attribute must belong to one of the CONSTANT, ADDRESS or REFERENCE classes and must have one of the following forms: DW_FORM_addr, DW_FORM_data1, DW_FORM_data2, DW_FORM_data4, DW_FORM_data8, DW_FORM_adata, DW_FORM_ref1, DW_FORM_ref2, DW_FORM_ref4, DW_FORM_ref8, or DW_FORM_ref_adata.

If the attribute named by argument *attr* is DW_AT_type and is not present in the debugging information entry referenced by argument *die*, and if a DW_AT_abstract_origin or DW_AT_specification attribute is present in the debugging information entry, function **dwarf_attrval_unsigned()** will search for the named attribute in the debugging information entry referenced by the DW_AT_abstract_origin or DW_AT_specification attribute.

RETURN VALUES

On success, these functions return DW_DLV_OK. If the named attribute was not found in the specified debugging information entry descriptor these functions return DW_DLV_NO_ENTRY and set argument *err*. For other errors, these functions return DW_DLV_ERROR and set argument *err*.

COMPATIBILITY

These functions are extensions added by this implementation of the DWARF(3) API.

ERRORS

These functions may fail with the following errors:

| | |
|------------------------|---|
| [DW_DLE_ARGUMENT] | Either of the arguments <i>die</i> or <i>ret</i> was NULL. |
| [DW_DLE_NO_ENTRY] | Argument <i>die</i> did not contain an attribute corresponding to the value in argument <i>attr</i> . |
| [DW_DLE_ATTR_FORM_BAD] | The attribute named by argument <i>attr</i> was not of a permitted form. |

SEE ALSO

dwarf(3), dwarf_attr(3), dwarf_hasattr(3)